

### **REMARKS**

This responds to the Office Action mailed on February 20, 2008.

Claims 2-8, 12-17, 21-22, 24-25, 29-30, 34-36, and 38-39 have been canceled without prejudice. Claims 1, 11, 18, 20, 23, 28, 33, and 37 have been amended. No claims have been added. As a result, claims 1, 9-11, 18-20, 23, 26-28, 31-33, 37, and 40 are now pending in this application.

#### **Amendments to Claims 1, 11, 18, 20, 23, 28, 33, and 37**

Claims 1, 11, 18, 20, 23, 28, 33, and 37 have been amended. No new matter has been introduced.

Claim 1 has been amended by incorporating the subject matter of dependent claims 2, 3, 6, and 8, which claims have accordingly been canceled without prejudice.

Independent claim 11 has been amended by incorporating the subject matter of dependent claims 12-14 and 17, which claims have accordingly been canceled without prejudice. Dependent claim 18 has been amended by substituting “a destination transport delay” for “the destination transport delay”.

Independent claim 20 has been amended by incorporating the subject matter of dependent claims 21 and 22, which claims have accordingly been canceled without prejudice.

Independent claim 23 has been amended by incorporating the subject matter of dependent claims 25, which claim has accordingly been canceled without prejudice.

Independent claim 28 has been amended by incorporating the subject matter of dependent claims 29 and 30, which claims have accordingly been canceled without prejudice.

Independent claim 33 has been amended by incorporating the subject matter of dependent claims 35 and 36, which claims have accordingly been canceled without prejudice.

Independent claim 37 has been amended by incorporating the subject matter of dependent claims 38 and 39, which claims have accordingly been canceled without prejudice.

### **Objections to the Claims**

Claims 1, 5, 11, 13, 18, 20, 22, 23, 26, 28, 29, 31, 33, 36-38, and 40 were objected to due to various informalities asserted by the Examiner. As mentioned earlier, claims 2-4, 13, 22, 29, 36, and 38 have been canceled. The Examiner's comments and suggestions have been considered in amending the rest of the claims that were objected to.

Applicants assert that the phrase "substantially synchronized clock" is a positive recitation that would be understood by one of ordinary skill in the art. The term "substantially synchronized clock" is believed adequately defined on page 4, lines 17-19. As described on page 11, lines 8-22, in an embodiment, a source MAC-layer clock 324 may be substantially synchronized with a destination MAC-layer clock 342. In an IEEE 802.11 system, the clocks may be within 3 microseconds of one another. It would be imprecise to delete the word "substantially" from "substantially synchronized clock", because the above-described clocks may not be precisely synchronized. Therefore, Applicants respectfully request the Examiner to withdraw her objection to the term "substantially synchronized clock" in the claims.

In summary, it is respectfully requested that the Examiner's objections to the claims be withdrawn.

### **Rejection of Claims 1-7, 9-14, 16, and 18-40 under 35 U.S.C. §103(a) as Unpatentable over Myles in view of Yonge**

Claims 1-7, 9-14, 16, and 18-40 were rejected under 35 U.S.C. §103(a) as being unpatentable over Myles et al. (U.S. 2004/0008661 A1) further in view of Yonge, III et al. (U.S. 2005/0114489 A1). As stated earlier, claims 2-7, 12-14, 16, 21-22, 24-25, 29-30, 34-36, and 38-39 have been canceled without prejudice, leaving claims 1, 9-11, 18-20, 23, 26-28, 31-33, 37, and 40 subject to this rejection.

Regarding claim 1, the Examiner asserts that the combined teachings of Myles and Yonge teach all of the claim elements.

Myles discloses a method and apparatus for clock synchronization in a wireless network (see Title and Abstract). A transmitted beacon packet (FIG. 4B) includes a timestamp called

TSF<sub>beacon</sub> (see Para. 0087). However, it is noted that Myles fails to disclose a source application-layer timestamp, as conceded by the Examiner.<sup>1</sup>

The Examiner asserts that Yonge discloses a source application-layer timestamp, referring to Paras. 0059 and 0091 of Yonge. Yonge discloses a medium access control (MAC) network (FIG. 1) that may optionally use timestamps.

Para. 0059 of Yonge states:

*The MSDU format 100 also provides support for the layer of the network architecture 50 that is higher than the MAC layer 54 to control when a delivery time stamp has to be inserted.*

Although the Examiner fails to explain why she cited this paragraph, presumably the Examiner is implying that the MAC Service Data Unit (MSDU) payload supports a “source application”. However, no language could be found in Yonge to disclose that the layer 52 of network architecture 50 that is higher than MAC layer 54 contains source applications.

Para. 0043 of Yonge states *inter alia*:

*The PAL 52 provides support for Higher Layer Adaptation (HLA) functionality and/or Bridging functionality. Both HLA and Bridging operations support translation of host data packets including PAL Protocol Data Units (PAL<sub>i</sub>PDU) 70 to MAC Service Data Units (MSDUs) 71 and vice versa, translation of host address from the H1 interface 58 to MAC 12, 14, 16 addresses.*

The above language from Yonge fails to explicitly state that PAL 52 supports source applications.

The Examiner further quoted from Para. 0091, which states *inter alia*:

*The MPDU header 258 carries local clock time stamp information. This time stamp can be used by the receiver MAC (e.g., 14) to synchronize with the transmitter MAC 12, thus enabling jitter free service.*

Para. 0091 of Yonge is further elaborated in Paras. 0128 through 0132, in which Yonge describes a jitter control mechanism. A Delivery Time Stamp (DTS) may be inserted into a Sub-Frame (see Para. 0131). At the receiver, all of the MSDU payloads are delivered by the time indicated by the DTS in the Sub-Frame (see Para. 0131). However, it is noted that Yonge fails to disclose the following limitation from Applicants’ independent claim 1:

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<sup>1</sup> Office Action, p. 4.

**producing a medium access control (MAC) packet that includes the source application-layer timestamp, the source data, and the source MAC-layer timestamp, wherein the source MAC-layer timestamp is based on a substantially synchronized clock between the source device and a destination device, and the source MAC-layer timestamp indicates a time when the source data is provided for transmission across a portion of a system that is subject to variable delays**

At most, Yonge discloses only a single timestamp (DTS) in a MAC packet (see 156, FIG. 4).

Further, independent claim 1, as amended, includes the following additional two limitations, previously recited in dependent claims 6 and 8, respectively:

**establishing a fixed transport delay value for the destination device to use to schedule delivery of the source data to a destination application; and  
determining a longest observed delay between the source device and the destination device to determine the fixed transport delay value.**

The Examiner concedes that neither Myles nor Yonge specifically disclose the second of these limitations.<sup>2</sup> However, the Examiner asserts that Chapman teaches this limitation, citing the following language from Para. 0026 of Chapman :

*the master timestamp counter 44A in the master TSC 18A has a particular timestamp value at pulse 50 of synchronization pulses 14. In this example, the timestamp counter value is thirty. At a next pulse 52, the value of master timestamp counter 44A is thirty five. The processor 40A in master TSC 18A calculates the period T between pulses 50 and 52 to be five counts. The processor 40A predicts that the master timestamp counter 44A will have a value of forty at pulse 54.*

First, Applicants note that Chapman's disclosure deals with a cable modem network, not a wireless network. But more importantly, the above-quoted language from Chapman totally fails to disclose "determining a longest observed delay". Chapman totally fails to observe a longest delay. Chapman merely predicts a delay of 40 in the given scenario. Moreover, Chapman fails to disclose that a delay of 40 would in fact be "a longest delay".

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<sup>2</sup> *Ibid*, p. 16

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the prior art reference (or references when combined) must teach or suggest every limitation of the claim. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). MPEP §2143.

The asserted combination of Myles in view of Yonge further in view of Chapman fails to teach or suggest all of the claim limitations present in independent claims 1, as amended, so a *prima facie* case of obviousness has not been established.

Regarding independent claims 11, 20, 23, 28, 33, and 37, as amended, the Examiner's suggested combination of references likewise fails to teach or suggest some or all of those limitations discussed in detail above.

For the above reasons, independent claims 1, 11, 20, 23, 28, 33, and 37 should be found to be allowable over any combination of Myles, Yonge, and Chapman, and Applicants respectfully request that the rejection of these claims under 35 U.S.C. §103(a) should be withdrawn.

Further, those claims that depend from independent claims 1, 11, 20, 23, 28, 33, and 37, and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

**Rejection of Claims 8 and 17**  
**under 35 U.S.C. §103(a)**  
**as Unpatentable over**  
**Myles and Yonge**  
**and further in view of Chapman**

Claims 8 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Myles et al. and Yonge, III et al. and further in view of Chapman (U.S. 2005/00581569A1).

As stated earlier, dependent claims 8 and 17 have been incorporated into claims 1 and 11, respectively. The Examiner is respectfully referred to Applicants' arguments above regarding the patentability of claim 1 over the Examiner's suggested combination of Myles, Yonge, and Chapman.

**Rejection of Claim 15**  
**under 35 U.S.C. §103(a)**  
**as Unpatentable over**  
**Myles and Yonge**  
**and further in view of Trachewsky**

Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over Myles et al. and Yonge, III et al. and further in view of Trachewsky et al. (U.S. 2003/0206559 A1). As stated earlier, claim 15 has been canceled without prejudice, so this ground of rejection is now moot.

**Additional Elements and Limitations**

Applicants consider additional elements and limitations of claims 1, 9-11, 18-20, 23, 26-28, 31-33, 37, and 40 to further distinguish over the cited references, and Applicants reserve the right to present arguments to this effect at a later date.

**Documents Cited But Not Relied Upon For This Office Action**

Applicants need not respond to the assertion of pertinence stated for the references cited but not relied upon by the Office Action, because these references are not made part of the rejections in this Office Action. Applicants are expressly not admitting to this assertion and reserve the right to address the assertion should it form part of future rejections.

**Conclusion**

Applicants respectfully submit that claims 1, 9-11, 18-20, 23, 26-28, 31-33, 37, and 40 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney Ann M. McCrackin (located in Minneapolis, Minnesota) at (612) 349-9592 or Applicants' below-signed attorney (located in Phoenix, Arizona) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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